AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A magnetic angular-position sensor mounted between two carrier elements that are movable in rotation relative to each other about an axis of rotation, the sensor comprising:

   firstly a magnetic member [[body]] defining a working zone in which there extends a magnetic field having field lines perpendicular to the axis of rotation[[,]]; and

   secondly a detector member comprising at least one probe extending in the working zone of the magnetic member in order to provide a signal as a function of the angular orientation of the probe relative to the field lines in the working zone,

   wherein the magnetic member comprises two parallel magnet segments and two elongate pole pieces of ferromagnetic material extending perpendicularly to the magnet segments and covering the ends thereof, and wherein the magnetic member is in the form of a frame so that field lines are parallel.

2. (Currently Amended) [[A]] The sensor according to claim 1, wherein the magnet segments are bar magnets.

3. (Currently Amended) [[A]] The sensor according to claim 2, wherein the pole pieces have chamfered ends.

4. (Currently Amended) [[A]] The sensor according to claim 1, wherein the magnetic member comprises a U-shaped magnet having flanges forming the magnet segments and a web forming a bottom for the magnetic member.

5. (Currently Amended) [[A]] The sensor according to claim 4, wherein the pole pieces have edges that are chamfered following a profile of the U-shaped magnet.

6. (Currently Amended) [[A]] The sensor according to claim 1, wherein the sensor is connected to the two carrier elements in such a manner that the probe moves over a detection range for which the signal from the detector is ~~substantially~~ linear.

7. (Currently Amended) [[A]] The sensor according to claim 6, wherein the ~~working~~ detection range extends over 35° on either side of the position in which the magnetic field measured by the probe is zero.